Great Bay Estuary 06/03/12

Issue

John Hall, on behalf of the Great Bay Municipal Coalition, sent a letter to the Administrator, dated May 4, 2012, accusing Region 1 of "serious regulatory violations, bias and scientific misconduct" and requesting: 1) a meeting with the Administrator's office to discuss the matter and 2) further review of Great Bay Estuary matters be withdrawn from Region I and transferred to an independent panel of experts who can evaluate the scientific information this is the foundation of the Region's position. Hall has indicated that he will request a referral of the matter to the IG if the matters are not withdrawn from Region 1.

Discussion

The Region believes Mr. Hall as seriously mischaracterized what has played out over the past 4-5 years in NH's listing of the Great Bay waters as impaired, their development of draft numeric nutrient criterion and EPA's subsequent development of draft NPDES permits for three municipalities. We are confident that the record does not support Hall's assertions and we stand ready to assist OW's review of the record and response to Hall's letter.

Background

Great Bay, Little Bay, Upper and Lower Piscataqua, and all of the tidal rivers draining to Great Bay and Little Bay are impaired due to excessive nitrogen loadings. Eelgrass loss in all but one tidal river to Great Bay and Little Bay ranges from 97% - 100%. Eelgrass in Great Bay has declined by 37% and there are clear signs of deteriorating health. Little Bay has lost 97% of its eelgrass. Eelgrass loss in the Upper Piscataqua is 97% and in the Lower Piscataqua is 82%.

In 2009, NH DES developed numeric nutrient criteria to protect eelgrass habitat and prevent low dissolved oxygen in the estuary. These criteria are expected to be promulgated as new water quality standards during 2011. In 2009, most of the estuary was added to the (303 d) list of impaired waters due to excess nitrogen. Once on the impaired waters list NH DES must do (TMDL) studies to determine the maximum allowable loading of nitrogen necessary to meet water quality standards.

EPA is the NPDES permitting authority in New Hampshire. We have issued draft permits for Exeter (3/22/11), Newmarket (10/05/11) and Dover (01/06/12) and provided lengthy public comment periods. Each permit has a proposed TN limit of 3 ug/m3. Although the limits are the same, they were derived individually; each facility discharges to a different tributary river to the estuary system. The region has held discussions with Exeter and Newmarket about the general terms of a compliance order post permit issuance that would have the facility move as quickly as possible to a TN limit of 8, implement as much nonpoint source control as possible, monitor the receiving water and determining around year 10 whether they needed to build further control at the treatment plant. John Hall has not been a party to these discussions, although we believe the two communities have shared the gist of our conversations with their Coalition partners. We are about 75% done preparing the Response to Comments document for the Exeter permit and have signaled that we are likely to issue the final permit later this summer.

A coalition of five like-minded municipalities in the watershed have formed an alliance (the Great Bay Municipal Coalition) to challenge the science on which the need for stringent nitrogen limits is based, despite the overwhelming amount of scientific data compiled over decades that support these limits. They have argued for further study, less stringent limits and longer implementation schedules. The Coalition is likely to appeal any future permits proposed by EPA. The central concern of the regulated community is the expected high cost of treatment plant improvements needed to achieve protective limits for nitrogen, as well as, the possible

impacts from other regulatory actions including stormwater permitting and designation of additional sources subject to permitting.

Great Bay and Little Bay, which are fed by five tidal rivers, drain to Portsmouth Harbor via the Piscataqua River. The Great Bay watershed covers approximately 1,000 square miles (mostly in NH and partly in Maine) and is home to about 22% of NH's population. The estuary has been designated an "Estuary of National Significance" by EPA and is part of the NOAA National Estuarine Research Reserve Program. Estuary conditions are deteriorating, and according to the Piscataqua Region Estuaries Partnership's "State of the Estuaries Report" 11 of 12 environmental indicators show negative or cautionary trends. These are symptoms of population growth, increased nutrient loads, and non-point source pollution. Approximately 1,500 acres of impervious surfaces are added to the watershed each year.

Nitrogen is delivered to the Great Bay Estuary system via point sources and non-point sources (NPS) originating in both New Hampshire and Maine. While NPSs are the dominant load of Total Nitrogen (78% for Great Bay/Little Bay and 59% for the Upper Piscataqua), point source loadings are significant. There are 14 municipal wastewater discharges in New Hampshire (EPA issued permits) and 4 municipal wastewater discharges in Maine (delegated permits program) contributing approximately 19 MGD of wastewater to the Great Bay Estuary. The combined design flow of these facilities is 31 MGD.